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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/517,447	12/09/2004	Takahisa Hikida	0033-0966PUS1	8647
2292 7590 04/30/2007 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			EXAMINER HUG, ERIC J	
			ART UNIT 1731	PAPER NUMBER

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	04/30/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 04/30/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Period for Reply

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If no period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 December 2004.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 8 is/are rejected.
- 7) ☒ Claim(s) 7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3, 5, and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Cedercreutz (GB 2 012 327). Cedercreutz discloses an endless thermoplastic web for paper making which is smoothed by application of heat and pressure so as to soften and compress the surface of the web coming into contact with the paper. Referring to the figure, felt 1, made of thermoplastic fibers such as polyamide, polyester or polypropylene fibers, is simultaneously heated and subjected to pressure by passing through a roller nip 6 formed by rolls 4 and 5. The technique is applicable to various types of papermaking webs (page 2, lines 21-24). Roll temperature can span 20-260 degrees C, which encompasses the claimed temperature range. Compressive pressure can be up to 200 kp/width cm, which is equivalently 196.1 kN/m [200 kp (kiloponds) = 1.961 kN]. See page 2, lines 1-11 for processing conditions. See also the Example on page 2, starting line 30, which recites a process speed of 5 m/min.

Claims 1, 3, and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Dutt (GB 2218940). Dutt discloses an elastic extended nip press belt for papermaking. In the method of manufacturing the belt, a polymer layer is attached to a base fabric. The steps

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including utilizing upper and lower press platens which are heated in order to melt the polymer layer and press it into a portion of the base fabric. The press platens can be smooth to provide a belt with smooth surfaces as shown in Figures 2A and 3A. After sufficient time, the press platens are opened, an untreated portion of the base fabric is advanced to the platens, and then melting of polymer to the base fabric is performed again. The steps of polymer treatment and fabric advancement are repeated until the entire base fabric has been impregnated with polymer.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dutt (GB 2218940).

The press belt of Dutt and the method of making the belt utilizing heated press platens are described above. Regarding the use of the press platens to make the belt, Dutt does not disclose any particular temperature, pressure, or time interval between the press platens which would be suitable for melting, pressing, and smoothing the polymer onto the base fabric. Dutt does recognize that a certain time interval is required (page 7, line 8) and that the method of heating and pressing must be carried out so that the need for grinding is eliminated (page 5, line 8). Thus, temperature, pressure, and time are considered to be process variables one skilled in the art would recognize as needing optimization to provide a fully impregnated belt with a smooth

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surface. One skilled in the art would choose temperature, pressure, and time depending on the types of materials used for polymer and base fabric and on the desired fabric specifications. The claimed ranges of temperature, pressure, and time are deemed to be obtainable through experimentation.

Claims 2 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dutt (GB 2218940) in view of Steiner et al (DE 4322322).

The press belt of Dutt and the method of making the belt utilizing heated press platens are described above. The roughness of a belt prepared by Dutt with a smooth surface is not disclosed. Steiner discloses an elastic press belt for a paper making machine. Steiner is cited here to show that a press belt with a smooth surface is known in the art to have a surface roughness which is less than the claimed roughness of 20 microns. In this instance, the belt of Steiner has a different degree of roughness on both sides, both being less than 20 microns (less than 5 microns on the outer paper-contacting side, about 10 microns on the inner side). The press belt of Steiner is deemed to be representative of papermaking press belts, therefore at the time of the invention it would have been obvious to one skilled in the art to make the smooth belt of Dutt with a surface roughness less than 20 microns.

Allowable Subject Matter

Claim 7 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

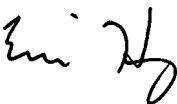
Claim 7 is allowable for thermally pressing a surface of an elastic belt after it has been polished.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Hug whose telephone number is 571 272-1192.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571 272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Eric Hug